IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Kurt Konolige	Attorney Docket No.: SRI1P023C1D1
Application No.: 10/665,881	Examiner: Vikkram Bali
Filed: September 19, 2003	Group: 2624
Title: REALTIME STEREO AND MOTION ANALYSIS ON PASSIVE VIDEO IMAGES USING AN EFFICIENT IMAGE-TO-IMAGE COMPARISON ALGORITHM REQUIRING MINIMAL BUFFERING	Confirmation No.: 6775

APPLICANT INITIATED INTERVIEW REQUEST FORM

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Tentative Participants:

1) **R. Mahboubian** 2)
3) 4)

Proposed Date of Interview: **October 11, 2006** Proposed Time: **2:00 PM** (Eastern Time)

Type of Interview Requested:

☒ Telephone ☐ Personal ☐ Video Conference

Exhibit to be Shown or Demonstrated: ☐ Yes ☒ No
If yes, provide brief description:

ISSUES TO BE DISCUSSED

Issues (Rej., Obj., etc.)	Claims/ Fig., #s	Prior Art	Discussed	Agreed	Not Agreed
1) 103	Claim 49	*Anderson et al.*	☐	☐	☐
2)			☐	☐	☐
3)			☐	☐	☐

BRIEF DESCRIPTION OF AGRUMENTS TO BE PRESENTED:

In the Office Action, the Examiner has noted that *Anderson et al.* does not teach: "obtaining a line from each feature image" (claim 1). It should be noted that claim 1 further recites: "computing a correlation of two lines," and "storing the result of the correlation in the window summation buffer" in order to perform area correlation on first and second feature images. Initially, it is respectfully submitted that the deficiency of *Anderson et al.* cannot possibly be cured by another reference because, among other things, *Anderson et al.* fails to teach obtaining a line from each feature image and computing the correlation of the two lines, and storing the result or the correlation in a window summation buffer in order to perform correlation on feature images.

In the Office Action, the Examiner seems to be asserting that *Anderson et al.* teaches or suggests "obtaining a line from each feature image," and consequently somehow teaches or suggests computing the correlation of the two lines and storing the result in a window buffer. To support this assertion, the Examiner has relied on a section of *Anderson et al.* which is reproduced below for the Examiner's convenience.

> Prior probabilistic models models can be classified according to whether the disparity field is modelled as totally uncorrelated (0-D modelling), correlated in one dimension, say within scanlines (1-D), or correlated in both dimensions. The degree of correlation affects the difficulty of the estimation problem. The present invention makes use of the uncorrelated and one-dimensional cases. In the uncorrelated case, posterior probabilities can be derived that provide valuable confidence estimates and may be useful for performance evaluation purposes. (*Anderson et al.*, Col. 7, lines 41-52)

Clearly, the general knowledge that a disparity field can be classified in the context of probability models in one dimension within scanlines (1-D) does NOT teach or even remotely suggest "obtaining a line from each feature image" and computing a correlation for the lines in the context of performing area correlation on first and second feature images. Accordingly, it is respectfully submitted that the Examiner's rejection is improper.

Clearly, there is not a teaching or even a remote suggestion in *Anderson et al.* with respect to obtaining a line from each image to compute correlation. However, assuming purely for the sake of discussion that the stereo correlation algorithm of

Anderson et al. (Fig. 4 and Col. 4, lines 12-38) can be modified to obtain a line for each feature image to compute a correlation of the lines, the resulting methodology would not perform the area correlation in accordance with the invention recited in claim 1. Firstly, it should be noted that stereo correlation algorithm of *Anderson et al.* performs a shift (74) on the left laplacian image (30) prior to performing "difference image (78). This shifting of the left laplacian image (30) is incongruent with obtaining a line from each image. In fact, the initial shifting of the left laplacian image teaches away from obtaining a line from each feature image. It should be noted that even if the stereo correlation of *Anderson et al.* could be modified to obtain a line from each feature image, many additional advantages of the invention would not be realized. For example, this hypothetical modified methodology would not allow "using the information stored in the window summation buffer to compute a new line in a disparity image" (claim 50). As another example, the hypothetical modified methodology would not yield "computing two minimum values from the information stored in the window summation buffer to perform a left/right consistency check (claim 51).

Other independent claims recite similar features as recited in claim 1 and are patentable over *Anderson et al.* for at least the same reasons. Moreover, it should be noted that other independent claims recite additional features. For example, claim 54 recites: "a first buffer capable of storing more than Y but less than 3Y lines of the first feature image," and "a second buffer capable of storing more than Y but less than 3Y lines of the second feature image."

49. (Previously Presented) An apparatus for performing area correlation on a first feature image and a second feature image, each feature image including a plurality of lines, the apparatus comprising:

one or more buffers capable of storing at least part of each feature image;

a window summation buffer; and

a processor capable of:

obtaining a line from each feature image;

computing a correlation of the two lines at a plurality of disparities; and

storing the results of the correlation in the window summation buffer.

An interview was conducted on the above-identified application on .

*Note: This form should be completed be applicant and submitted to the examiner in advance of the interview (see MPEP §713.01). This application will not be delay from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFT 1.33(b)) as soon as possible.

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(Applicant/Applicant's Representative) (Examiner/SPE Signature)
Signature)